



Better Chemistry. **Better Business.**

**Mi-Clean™ 14**

**Product Code: 2002012**  
**Revised Date: 3/3/2016**

### Mi-Clean™ 14

**Mi-Clean™ 14** is a heavy-duty, alkaline soak cleaner for most metals except aluminum and zinc. It is a free flowing alkali salt mixture, which is readily soluble in water. The latest ideas in cleaning and the newest developments in basic chemicals have been incorporated into **Mi-Clean™ 14**.

**Mi-Clean™ 14** is used in concentrations of 4 to 8 ounces of the **Mi-Clean™ 14** per gallon of water and maintained at approximately 180°F. If sufficient heat is not available, it can be used at 150-160°F., with good results, because of its high detergent properties.

In cases where heavier duty cleaning action is required, the solution can be used at boiling. When the **Mi-Clean™ 14** solution is at a boil, there is not only the advantage of higher temperatures, but a mechanical scrubbing action because of the boiling agitation of the solution.

The concentration of the cleaning solution is kept at the required concentration or strength by periodic additions of **Mi-Clean™ 14**. Normally, these additions will keep the solution in good operating efficiency until the **Mi-Clean™ 14** solution becomes excessively contaminated and at this point the cleaning solution must be drained off and a new one made up.

Accurate chemical control can be accomplished by simple titration methods, which can be furnished upon request.

### **WARNING**

May burn skin and eyes. DO NOT TAKE INTERNALLY

In case of accidental skin contact or eyes, flush freely with water for at least fifteen (15) minutes. Obtain medical attention.

### **CONTROLS**

#### TITRATION PROCEDURE

Factor (oz/gal) 0.66

Factor (gms/l) 5.0

1. Pipette a 10 ml sample into a 250 ml Erlenmeyer flask and add 100 mls of water.
2. Add 5-10 drops Phenolphthalein Indicator.
3. Titrate with 0.5 N hydrochloric acid until the solution turns from pink to colorless.
4. Record mls 0.5 N hydrochloric acid used.



## Product Bulletin

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**Concentration of Mi-Clean™ 14 = Factor X mls 0.5 N acid**

### TEST KIT PROCEDURE

Factor (oz/gal) 0.61

Factor (gms/l) 4.8

1. Fill test bottle 1/3 full of water. Add ½ ml of Mi-Clean™ 14.
2. Add 4-8 drops Phenolphthalein Indicator.
3. Add 0.72 N Hydrochloric Acid solution drop-wise while mixing until the solution turns from pink to a colorless endpoint. Record number of drops.

**Concentration of Mi-Clean™ 14 = Factor X number of drops 0.72 N  
Hydrochloric Acid Solution**

### WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.